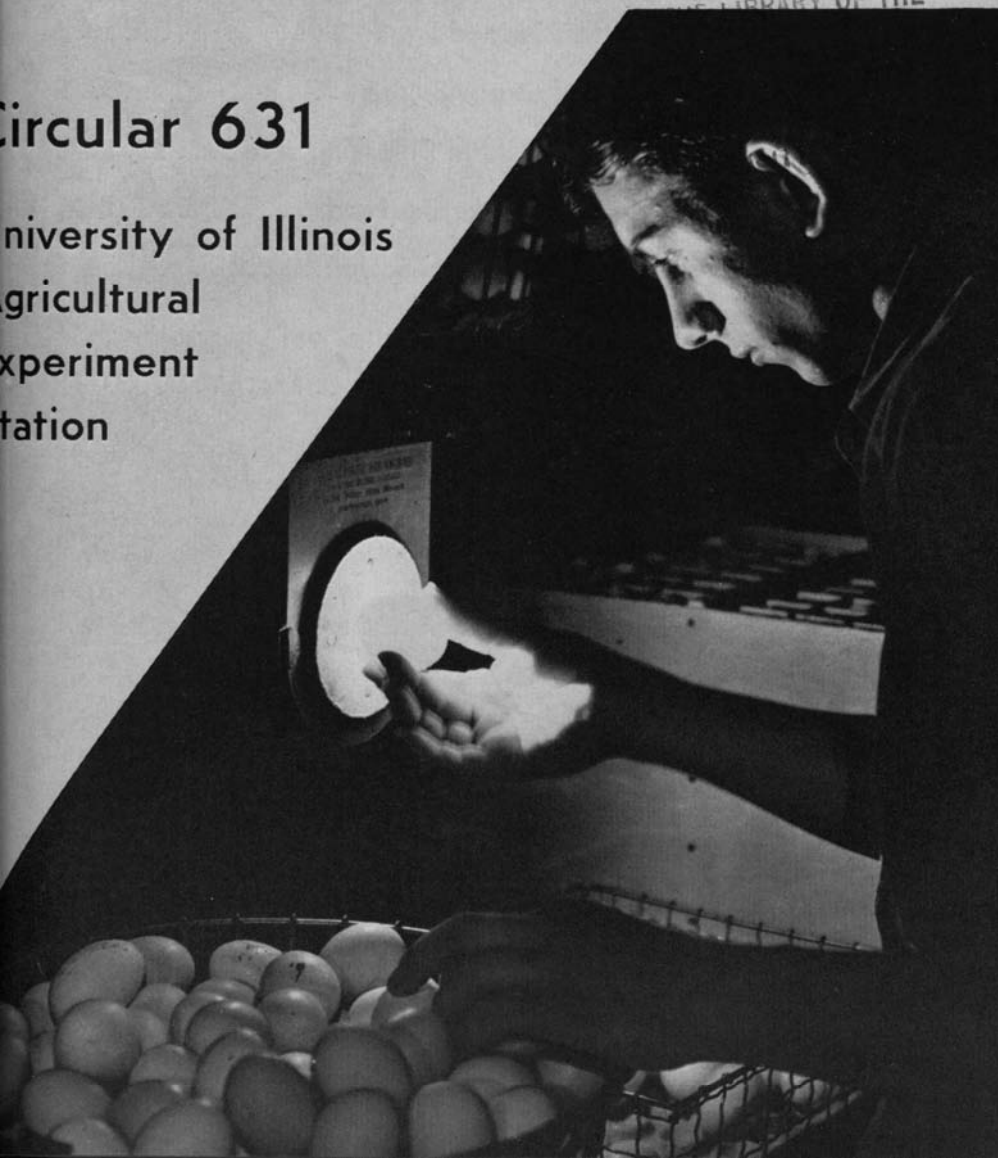




# GRADING will improve the Market For Illinois EGGS

Circular 631

University of Illinois  
Agricultural  
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# GRADING WILL IMPROVE THE MARKET FOR ILLINOIS EGGS

By L. J. NORTON, SCOTT HATHORN, JR., and EMER BROADBENT<sup>1</sup>

**T**O BUILD A BETTER MARKET for eggs in Illinois, three things are essential. First, farmers must produce and market eggs of high and certain quality. Second, consumers must be willing to pay premium prices for quality eggs. And third, the market must be so organized that the farmers will get the premiums that consumers pay for better-than-average quality. This means buying eggs from farmers on the basis of grade.

The present system of sale does not encourage production of quality eggs. Most Illinois eggs are sold simply as eggs. Little attention is given to quality or appearance, except that prices may be varied for size. This offers no incentive for farmers to deliver quality eggs.

On most Illinois farms the poultry industry is a minor enterprise. Egg sales have accounted for only about five cents of each dollar of Illinois farm income in recent years. The farm flock is the typical unit of production. In 1939 seven eggs out of every ten came from flocks of 50 to 200 birds.

Except during the war, the poultry industry has grown little in the past twenty-five years. As an egg producer, Illinois dropped from fourth among the states in 1925 to seventh in 1946. Such growth as there has been comes from higher production per bird rather than from increase in the size of flocks. The general attitude of Illinois farmers toward poultry was indicated by a sharp decline in purchases of day-old chicks in the spring of 1948 when feed costs were high.

What causes this lack of interest? It may be due to poor markets, the greater attraction of other farm enterprises, or a lag

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in making technical improvements in the industry. Or Illinois may have been slow to improve the marketing of eggs, so that egg-feed ratios have been less favorable than in other states. Compare the way in which food is displayed, packaged, and merchandised today with the way it was marketed twenty years ago. People are increasingly particular about the quality and appearance of the food they buy. This trend applies to eggs as well as to other food items.

## **How Eggs Are Sold in Illinois**

Most eggs are bought by dealers in Illinois as ungraded country-run eggs. In central markets, like Chicago, these are referred to as "current receipts." Over most of the state the prices paid are the current-receipt quotations less the transportation costs and the margin which local dealers need to cover their costs and profits.

Buyers of ungraded eggs may sell them to other dealers as current receipts, grade them out on the basis of commercial grades, or sell them merely as ungraded eggs to retail customers.

The most common commercial grades of eggs in the Midwest have been "Extras" and "Standards." Eggs of these grades average higher in price than "current receipts" (Fig. 1) because off-grade eggs have been sorted out, and buyers have more definite assurance of quality. The price has to be enough higher to cover the cost of grading and the loss on the "dirties" and "checks" which must be sold at a lower price.

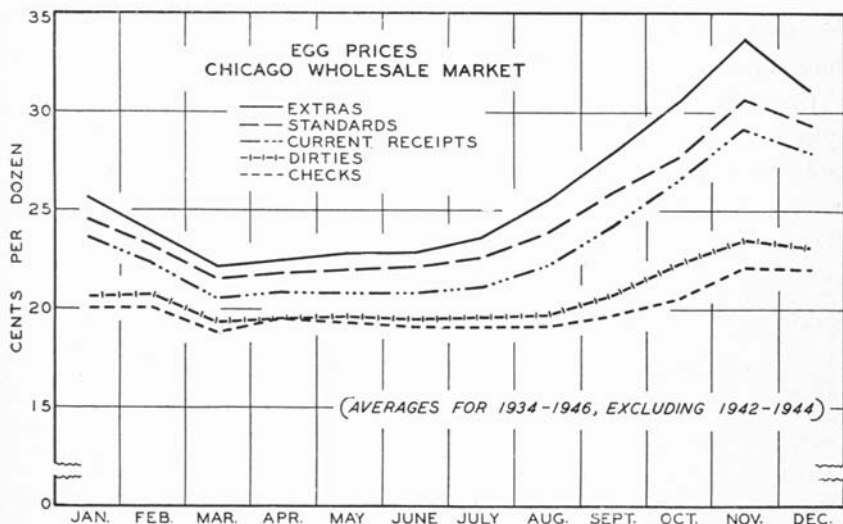
A few eggs are sold on the basis of federal grades. These grades are AA, A, B, and C. AA indicates the best eggs and C the poorest.

## **How Good Are Illinois Eggs?**

To sell their eggs at a price higher than that paid for current receipts, farmers must offer eggs that will qualify for the better grades. Are Illinois eggs good enough to do this? The answer is that they could be if marketed correctly.

During the war the quality of eggs sold at retail in the United States was estimated to be: AA, 7 percent; A, 35 percent; B, 42 percent; and C, 16 percent.<sup>1</sup> To get more definite information on

<sup>1</sup> Botsford, H. E. National uniform standards for quality of individual eggs, egg grades, weight classes, and regulations, p. 6. War Food Administration. December, 1944.



During the spring months of heavy production, the difference between prices of "extras" and "current receipts" was not great, averaging only 1.8 cents a dozen from March thru June. From September thru November, however, when production was lower, the margin was 4.1 cents. (Fig. 1)

the quality of Illinois eggs, the Illinois Station studied the grades of eggs bought by two buyers who were paying farmers on the basis of grades.

One of these buyers, in the northern part of the state, was buying from farmers in two ways: (1) thru retail stores at a flat price to farmers; (2) on the basis of grades at a central buying point. The eggs bought at the stores were held under refrigeration and delivered to the grading point three times a week. Eggs bought by the two methods from March 17 to April 5, 1947, and those bought on grade from April 1 to December 27, 1947, graded as follows:

Grade	Mar. 17 - Apr. 5, 1947		Apr. 1 - Dec. 27, 1947	
	Nongraded perct.	Graded perct.	Graded perct.	
A .....	49.66	83.84	81.60	
B .....	34.01	8.88	11.90	
Checks .....	15.13	6.15	5.87	
Rots .....	.76	1.13	.63	
Total .....	99.56 <sup>a</sup>	100.00	100.00	

(<sup>a</sup> Also .44 percent leakers and shorts.)

Half the eggs bought by stores and then handled with some care graded A even tho the producers were paid no premiums.

When eggs were delivered direct to the grading station and sold on grade, slightly over 80 percent graded A.

The results with the nongraded eggs corresponded to results obtained earlier by this firm when it candled 50,000 cases of eggs bought at a flat price thru stores during the thirteen months February, 1946, to March, 1947. The eggs graded 48.6 percent A; 35 percent B; and 16.4 percent other grades. Thus about half of the eggs delivered to this buyer graded A. The grades ran somewhat lower from August thru December than in the other months.

The operations of another grade-buyer in east-central Illinois were studied for the sixteen months from January, 1946, thru April, 1947. This buyer picked up eggs from farmers over a radius of forty miles once or twice a week. The proportion of A and AA grades together varied, by weeks, from 82.2 percent to 90.6 percent. These findings coincided with those of the first buyer in showing that when eggs are bought on grade direct from farmers, over 80 percent can be grade A or better.

### **Premiums Were Paid for Graded Eggs**

At the first station it was possible to compare the average prices paid for graded eggs and ungraded eggs. For the three weeks between March 17 and April 5, the average difference was 4.14 cents a dozen.

Between April 1 and December 27, 1947, this buyer paid an average premium of 4.23 cents a dozen for eggs bought on grade. A premium was paid in all but four weeks of the period. It was highest in May, June, and July. A farmer will ask this question: Did the 4-cent premium cover the extra cost and trouble involved in producing, caring for, and delivering the eggs to the grade-buyer? Apparently the local farmers thought it did; three and a half times as many eggs were delivered to this station in December, 1947, as in the preceding April.

The second grade-buyer bought only on grade, so prices of graded eggs and ungraded eggs could not be directly compared. Local current-receipt prices were estimated, however, by deducting from the Chicago current-receipt price the usual differential

between Chicago and local prices. For the 69-week period the average premium paid for graded eggs over this calculated current-receipt price was 7.11 cents a dozen. From this a pick-up charge of 1 cent must be deducted. The size of the premium over current-receipt prices varied considerably, but in only 3 of the 69 weeks was it less than 5 cents a dozen. The higher premium of the second buyer reflected extra premiums paid for AA eggs.



Market grades of eggs reflect both the weight of eggs and their interior quality. Interior quality is determined by candling (shown on the front cover). Mechanical graders like the one above sort eggs automatically by weight, according to U. S. standards, much faster than they can be sorted by hand. (Fig. 2)

Between July, 1943, and May, 1947, a third grade-buyer in southwestern Illinois paid an average premium over local current-receipt prices of 4.5 cents a dozen.

From these observations of grade-buying we may conclude that a rather high percentage of Illinois eggs if properly marketed would grade A or better, and that graded eggs can usually command a higher price than ungraded eggs.



## Three Keys to Successful Grade-Buying

Successful grade-buying of eggs has at least three requirements: (1) adequate volume of business; (2) good outlets for eggs of premium quality; and (3) cooperation by farmers in producing and handling eggs so that they will be of high quality when they reach the buyer.

**Enough volume.** Any type of business requires a minimum volume of business for successful operation. Certain fixed costs have to be met. In egg-grading, for example, a competent grader and certain special equipment for grading and properly holding the eggs are needed. If the cost of these cannot be spread over enough business, the cost per unit becomes too high.

**Good outlets.** To pay premiums, a buyer must be able to sell the better eggs at a premium. The three grade-buyers whose operations were studied did not sell in ordinary commercial channels. Two had outlets with retail chain-store companies in Chicago and St. Louis whose customers were willing to pay premiums for superior eggs. The other had developed his own special outlets for high-quality eggs.

**Quality eggs.** It is obvious that eggs sold by a dealer can be no better than the eggs he receives. In order to develop an outlet for good eggs, the buyer must have good and dependable raw material. This is the responsibility of the farmer.

## Volume of Surplus Eggs Varies in Different Areas

To find out which parts of Illinois had large volumes of surplus eggs we studied: (1) the location of centers of egg production; (2) how the consumption in different counties was related to production there.

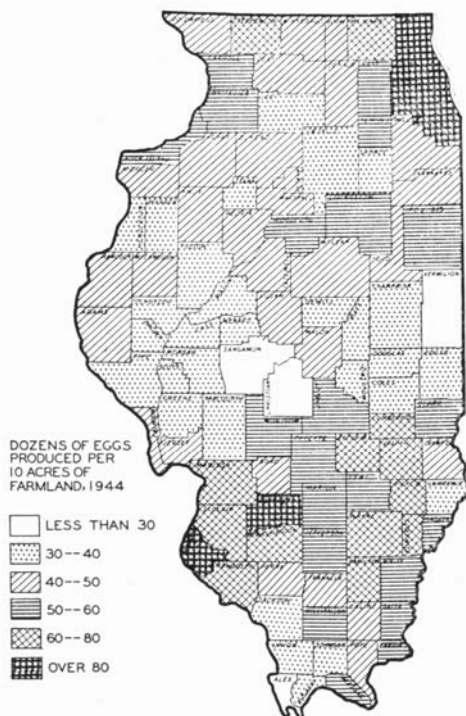
The heaviest concentrations of production are in the southern third of the state (except for the most southern counties) and in the northwest, northeast, and east-central counties. This is illustrated by Fig. 3, where the number of dozens per ten acres of farmland in 1944 is shown.

Illinois, with a population of about 8 million, uses a great many eggs. The Chicago area is a heavy consumer, of course, but so are



the many smaller centers of population and the large farm population. Another large consuming center, St. Louis, Missouri, lies on the border of the state.

On the farms and in the smaller places local eggs are used. As the size of the population center increases, the eggs have to be



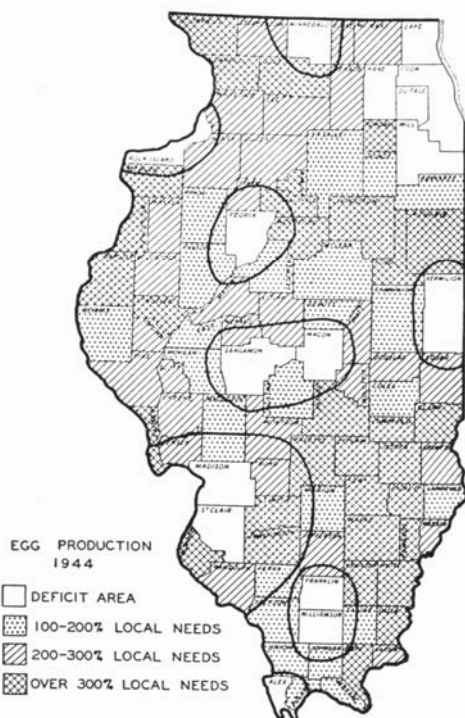
This map shows density of production, not total production. Five Illinois counties produce more than 80 dozen eggs per 10 acres of farmland; but on the basis of total production not one of the five is among the first ten egg-producing counties in Illinois. The average for the entire state is 48.1 dozen. (Fig. 3)

brought from greater distances. In areas where most of the eggs produced locally are consumed locally, it would be difficult to develop grade-buying. A number of the producers in such areas sell direct to consumers, and consumers are likely to be satisfied with the quality of locally produced eggs.

Direct sale to consumers prevails on a large scale in the area surrounding the Chicago metropolitan area. Producers develop

direct connections with consumers and so get premium prices for their eggs. On the fringes of this area hucksters operate, buying direct from farmers and selling to consumers. Under these conditions it would be difficult for a grade-buyer who resells in whole-sale channels to compete.

Grade-buyers can operate most successfully in areas where surplus eggs have to be shipped out. Local areas of surplus eggs are shown in Fig. 4. Counties in white usually have no surplus eggs. In these deficit areas grade-buyers probably could not operate successfully with local eggs unless they developed a premium market for local sales. The larger a population center is, the easier it is to develop such a special market.



Counties that used more eggs in 1944 than they produced are shown in white. The heavy black circles around these areas indicate about how much of the production of nearby counties would be needed to correct this deficit. Circles at the Illinois borders can be assumed to continue into neighboring states. No circle is drawn around Chicago because it buys many of its eggs from other states.

(Fig. 4)

## **Country Assemblers Should Take the Lead**

In areas of Illinois where there are surplus eggs, the common pattern of egg-marketing is: (1) sale by producers to local egg or produce dealers, feed dealers, grocery stores, or pick-up men who go to the farms; (2) sales by these men to country assemblers who ship in carlots or trucklots to Chicago or other market centers, to egg breakers, or direct to consuming areas. These assemblers are likely to do the first grading. This market pattern is well developed and is in the hands of established firms.

The country assembling firms should logically lead in developing a system of buying eggs on a grade basis. They have a definite stake in developing the poultry industry in their procurement areas. A more attractive market for producers will tend to make for greater egg production. A higher price of even a few cents a dozen, made possible by grade-buying, would encourage some producers in the area to increase the size of their flocks.

Grade-buying will tend not only to maintain total volume, but also to reduce the market risks inherent in buying eggs of uncertain quality. It will broaden or maintain market outlets, as the trend in food industries is toward higher and more certain quality.

If an improved and up-to-date system of buying eggs is to be developed in Illinois, it must be done either by the old established firms or by new firms. The logical move is for the old firms to adapt their operation to the improved system. In fact, they must do so if they want to increase, or even maintain, their volume of sales.

## **Problem of Local Assembly Can Be Solved**

The local buying point is not the logical place to grade eggs. Volume is usually too small for economical operation or for hiring competent graders. The place to grade eggs is at the plant of the country assembler who buys from several local buyers or buys many eggs direct from farmers.

For the farmer to be paid on grade, his eggs must be identified until they are graded by the country assembler. This problem, however, can be solved. For case lots and half-case lots, there would be no problem — the cases would simply be tagged.

To maintain quality until eggs reach the assembler, holding conditions at many local buying points would have to be improved.

## **Cooperation of Farmers Is Needed**

If farmers are to sell their eggs on a grade basis and at a premium price, obviously there must be someone who is willing to buy on a grade basis. Except in a few limited areas in Illinois, there are no such buyers. Where they have an opportunity to sell on grade, however, farmers must cooperate in two ways:

1. They must have eggs that will qualify for the better grades. To get such eggs requires good production methods and care in handling. Little extra cost is involved.

2. They must be willing to sell at a lower price any eggs that do not meet the standards for premium grades.

Farmers will respond to a system which pays premiums for quality by doing the things that are necessary to get this quality. This conclusion is supported by the increased amount of business being done by grade-buyers who have paid adequate premiums and by the tendency for buyers who previously bought eggs as current receipts to shift to grade buying.

## **Facts in Brief**

1. Fifty percent of the eggs now delivered by farmers in certain sections of Illinois grade A.

2. Where premiums are paid for quality, 80 to 85 percent of the eggs delivered grade A.

3. Certain buying stations were able in 1946 and 1947 to pay at least 4 cents a dozen more for eggs bought on grade than the local prices for ungraded eggs.

4. Successful grade-buying depends on an adequate volume of business, good outlets, and cooperation of farmers.

5. Grade-buying is likely to be most successful where production is high and local consumption relatively low.

6. The country egg trade in Illinois should logically go onto a basis of buying eggs on grade.

7. The grading should be done by the country assemblers rather than by small local buyers. This means that the identity of producers' eggs would have to be retained until the eggs reached the grading plant.